



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,701	03/26/2004	Josh Tyler	2019.100.US	8149
36139	7590	12/01/2005	EXAMINER	
EPSTEIN & GERKEN 1901 RESEARCH BOULEVARD SUITE 340 ROCKVILLE, MD 20850			NEWTON, JARED W	
			ART UNIT	PAPER NUMBER
			3634	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 10, 12, 16, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,673,092 to Lamson et al.

In regard to claim 1, Lamson discloses a multi-level pallet rack assembly comprising a lower pallet unit including a lower pallet 10 having a horizontal upper surface and a plurality of vertical posts 32,34 extending longitudinally upwardly from said upper surface, each of said posts having a lower portion secured to said lower pallet and having an upper portion, each of said posts having a longitudinal passage at said upper portion terminating at an upper end circumscribing an entry opening to said passage (see FIG. 1); a plurality of connectors 42 respectively associated with said passages, each of said connectors including a support flange 42c having a lower face and an upper face, a lower extension 42b extending longitudinally from said lower face and an upper extension 42a extending longitudinally from said upper face coaxial with said lower extension, said flanges having an external size to prevent passage of said flanges through said entry openings, said lower extensions being respectively disposed with a close fit in said passages via said entry openings with said lower faces of said

Art Unit: 3634

flanges in respective abutment with said upper ends of said passages (see FIG. 6).

Lamson recites, "Alternatively, as seen in FIG. 6, each elongated unitary core rod 14 is replaced by a pair of relatively short core rod members 42. Each core rod member 42 includes a short rod portion 42a having a length generally corresponding to the depth of length of tubular volumes 18b and 18c of tubular portions 18 (see Column 4, Line 16); and an upper pallet unit including an upper pallet 10 having a lower surface and a horizontal upper surface, and a plurality of bores 18 in said upper pallet respectively corresponding to said upper extensions, each of said bores having an entry aperture along said lower surface of a size to prevent passage of said flanges 42c therethrough, said upper extensions 42a being respectively disposed with a close fit in said bores via said entry apertures with said lower surface of said upper pallet in abutment with said upper faces of said flanges whereby said upper pallet is supported in parallel spaced relation over said lower pallet (see FIGS. 1 and 2).

In regard to claim 3, Lamson further discloses each of said lower portions of said posts having a longitudinal passage terminating at a lower end circumscribing an entry opening to said passage of said lower portion, and further including a plurality of securing devices respectively securing said lower portions to said lower pallet 10, said securing devices comprising an additional plurality of said connectors 42 respectively associated with said passages of said lower portions, said flanges 42c of said additional plurality of said connectors 42 having an external size to prevent passage of said flanges of said additional plurality of said connectors through said entry openings at said lower ends, said upper extensions 42a of said additional plurality of said

Art Unit: 3634

connectors being respectively disposed with a close fit in said passages of said lower portions via said entry openings at said lower ends with said upper faces of said flanges of said additional plurality of said connectors in respective abutment with said lower ends, and a plurality of bores in said lower pallet 18 respectively corresponding to said lower extensions 42b of said additional plurality of said connectors, each of said bores in said lower pallet having an entry aperture along said upper surface of said lower pallet of a size to prevent passage of said flanges of said additional plurality of said connectors 42 therethrough, said lower extensions 42b of said additional plurality of said connectors 42 being respectively disposed with a close fit in said bores 18b of said lower pallet via said entry apertures along said upper surface of said lower pallet 10, with said upper surface of said lower pallet bores in abutment with said lower faces of said flanges of said additional plurality of said connectors 42 (see FIGS. 1 and 6).

In regard to claim 4, Lamson further discloses said upper and lower portions of said posts 32 oriented in a coaxial relationship (see FIG. 1).

In regard to claim 10, Lamson discloses a pallet rack comprising a lower pallet unit including a lower pallet 10 having four corners and a horizontal upper surface, and four vertical posts 32, 34 respectively adjacent said corners extending longitudinally upwardly from said upper surface in a direction perpendicular to said upper surface, each of said posts having a lower portion secured to said lower pallet and an upper portion terminating at an upper end, each of said posts having a longitudinal passage in said upper portion with an entry opening at said upper end (see FIG. 1); four connectors 42 respectively associated with said posts, each of said connectors

Art Unit: 3634

including a lower extension 42b and an upper extension 42a having a common central longitudinal axis, and a support flange 42c between said lower and upper extensions perpendicular to said central longitudinal axis, each of said flanges having a lower face, an upper face and an external size to prevent passage of said flanges through said entry openings, said lower extensions being respectively disposed coaxially with a close fit in said passages via said entry openings with said lower faces of said flanges respectively supported on said upper ends of said posts (see FIG. 6); and an upper pallet unit including an upper pallet 10 having four corners, a horizontal upper surface and a lower surface beneath said upper surface of said lower pallet, and four longitudinal bores 18 in said upper pallet respectively adjacent said corners of said upper pallet in respective correspondence with said posts, each of said bores having an entry aperture along said lower surface of a size to prevent passage of said flanges 42c therethrough, said upper extensions being respectively disposed coaxially with a close fit in said bores via said entry apertures, said lower surface of said upper pallet being supported on said upper faces of said flanges with said upper surfaces of said pallets in parallel spaced relation (see FIG. 6).

In regard to claim 12, Lamson further discloses the pallet rack recited in claim 10 wherein each of said lower portions of said posts terminates at a lower end, each of said posts has a longitudinal passage in said lower portion with an entry opening at said lower end, and further including an additional four of said connectors 42 respectively associated with said posts 32 and 34, said external size of said flanges of said additional connectors preventing passage of said flanges of said additional

Art Unit: 3634

connectors through said entry openings at said lower ends, said upper extensions of said additional connectors being respectively disposed coaxially with a close fit in said passages in said lower portions via said entry openings at said lower ends with said lower ends respectively supported on said upper faces of said flanges 42c of said additional connectors, and further comprising four longitudinal bores 18 in said lower pallet respectively adjacent said corners of said lower pallet, said bores in said lower pallet being respectively coaxial with said bores in said upper pallet and having entry apertures along said upper surface of said lower pallet of a size to prevent passage of said flanges 42c of said additional connectors therethrough, said lower extensions of said additional connectors being respectively disposed coaxially with a close fit in said bores in said lower pallet via said entry apertures along said upper surface of said lower pallet, with said lower faces of said flanges of said additional connectors supported on said upper surface of said lower pallet (see FIGS. 1 and 6).

In regard to claim 16, Lamson further discloses each of said posts 32 and 34 as being tubular, or having a lumen extending longitudinally therethrough (see FIG. 1).

In regard to claim 19, Lamson discloses a pallet rack comprising upper and lower pallets 10 each having first and second parallel stringers 24 respectively disposed on opposite sides of said pallet, a horizontal upper surface 16 on top of said stringers, and a lower surface beneath said upper surface; four vertical posts 32,34 each having a central longitudinal axis, an upper portion terminating at an upper end, a lower portion, and an axial passage in said upper portion with an entry opening at said upper end, said lower portions being secured to said lower pallet with said posts extending

Art Unit: 3634

longitudinally upwardly from and perpendicular to said upper surface of said lower pallet, a first pair of said posts being in alignment with said first stringer of said lower pallet and a second pair of said posts being in alignment with said second stringer of said lower pallet; four longitudinal bores 18 in said upper pallet with respective entry apertures along said lower surface of said upper pallet, a first pair of said bores extending within said first stringer of said upper pallet in respective axial alignment with said first pair of said posts and a second pair of said bores extending within said second stringer of said upper pallet in respective axial alignment with said second pair of said posts, wherein, said stringers are integral with said tubular bores 18 (see FIG. 1); and four connectors 42 respectively coupling said posts to said upper pallet, each of said connectors including an upper extension 42a and a lower extension 42b having a common central longitudinal axis, and a flange 42c between said upper and lower extensions extending perpendicular to said common central longitudinal axis, said flanges being incapable of passing through said entry openings and said entry apertures, said upper extensions being respectively received in said bores through said entry apertures and said lower extensions being respectively received in said passages through said entry openings, said lower surface of said upper pallet being supported on said flanges and said flanges being respectively supported on said upper ends of said posts to support said upper surface of said upper pallet in spaced parallel relation over said lower pallet (see FIGS. 1 and 6).

In regard to claim 20, Lamson further discloses the pallet rack recited in claim 19 wherein each of said stringers 24 having a length and a width, said width of said first

Art Unit: 3634

and second stringers of said lower pallet is perpendicular to said upper surface of said lower pallet, said width of said first and second stringers of said upper pallet is perpendicular to said upper surface of said upper pallet, each of said upper surfaces comprising a plurality of deck boards 20 having a length perpendicular to said length of said stringers (see FIG. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over '092 to Lamson as applied to claims 1, 3, 4, 10, 12, 16, 19, and 20 above, alone.

In regard to claims 5 and 13, Lamson does not specifically show an additional plurality of vertical posts extending longitudinally upwardly from said upper surface of said upper pallet. Lamson does recite, "a multi-level rack assembly" (see Column 1, Line 31). It would have been obvious to one of ordinary skill in the art at the time of the invention to include additional support posts and platforms extending upwardly from the upper pallet as disclosed by Lamson, as is well known in the art of pallet and storage racks. The motivation would be to store more items in a vertical space.

In regard to claim 6, it would have been further obvious and is implied by the Lamson reference that any upper platform or pallet member would be longitudinally aligned with a lower member as taught by Lamson.

In regard to claims 14 and 15, it would have been further obvious and implied by the Lamson reference to use the securing connectors 42 to connect any additional posts and platforms to the disclosed assembly.

Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over '092 to Lamson as applied to claims 1, 3, 4, 10, 12, 16, 19, and 20 above, and in further view of U.S. Patent No. 3,576,169 to DePew.

Lamson discloses a device comprising all of the limitations of claims 1 and 10, but does not disclose a plurality of base plates respectively secured to said lower portions of said posts at perpendicular angles, and attached to the upper surface of the lower pallet. DePew discloses a pallet system comprising a lower pallet 1 comprising four vertical posts 7 and base plates 12 perpendicularly attached to the bottom portions of said posts and secured to said pallet (see FIG. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the base plates as disclosed by DePew as a securing means between the posts and lower pallet as disclosed by Lamson. The motivation for including the base plates would be to reinforce lateral and up-and-down security between the posts and the pallet.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over '092 to Lamson as applied to claims 1, 3, 4, 10, 12, 16, 19, and 20 above, and in further view of U.S. Patent No. 6,402,167 to Calleja.

Lamson discloses a device comprising all of the limitations of claim 5, but does not disclose shelves attached to said posts. Calleja discloses a pallet cart comprising a lower pallet 102 and four vertically extending posts 110,111,112,113. Calleja further discloses shelves 114,115,116 attached to support members 118,119,121,122,123,124 that attach to said posts (see FIG. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the horizontal support members and shelves as disclosed by Calleja on the vertical posts as disclosed by Lamson. The motivation for including shelves would be to provide a display area via the shelves for articles that are stored on the pallet.

Claims 8, 9, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over '092 to Lamson as applied to claims 1, 3, 4, 10, 12, 16, 19, and 20 above, and in further view of U.S. Patent No. 6,161,359 to Ono.

In regard to claims 8 and 9, Lamson discloses an assembly comprising two parallel, diagonally extending, side stabilizing members 28, and a rear, diagonally extending stabilizing member 30. Lamson does not disclose a front stabilizing member, or a removable stabilizing member.

In regard to claims 17 and 18, Lamson discloses an assembly comprising all of the limitations of claim 13, as well as fixed side stabilizing bars. Lamson does not disclose removable front and rear stabilizing bars, perpendicularly extending attachment plates on said posts, nor abutment plates on the ends of said stabilizing bars.

Ono discloses a shoring support structure comprising removable front and rear stabilizers (7,8,9,10), and parallel fixed side support stabilizers (14,15,16,17) as shown

Art Unit: 3634

in Figure 1. Ono further discloses abutment plates on the ends of said front and rear stabilizers (see FIG. 6) adapted to releasably secure to perpendicularly extending attachment plates 45 and 41, which are secured to side posts 11 and 12 (see FIGS. 6 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the removable front and rear stabilizers via the abutment plates on the stabilizers and attachment plates on the posts as disclosed by Ono, on the respective stabilizers and posts as disclosed by Lamson. The motivation for including removable front and rear stabilizers would be to enable a series of pallet assemblies to be lined up in a front-to-back orientation, so that long items such as piping, lumber, etc. can be stored without interference from the stabilizers.

Claims 1,3,4,5,6,10,12,13,14,15,16,19, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,400,671 to Erismann, and further in view of U.S. Patent No. 4,100,713 to Shoe.

In regard to claims 1, 3, 10, 12, and 16, Erismann discloses a pallet rack apparatus comprising upper and lower pallets 10, said pallets comprising bores 13 disposed on their corners, said apparatus comprising four tubular support posts 11 comprising upper and lower portions; plug connectors comprising upper ends 15,25 and lower ends 14,24, said upper ends 15 of connectors inserted into said bores of said upper pallet, and said lower ends 24 of connectors inserted into said upper portions of said posts, and said upper ends of said connectors 25 inserted into said lower portions

of said posts, and said lower ends of said connectors 14 inserted into said bores of said lower pallet (see FIGS. 1 and 2).

In regard to claims 5, 6, 13, Erismann further implies the inclusion of additional posts and pallets through the recitation, "...members permit at least a second pallet to be stacked at a distance above the first" (see Column 1, Line 27).

In regard to claims 19 and 20, Erismann further discloses said pallets comprising first and second parallel stringers 33 on opposite sides of said pallet disposed perpendicularly to wooden planks 40, which form a support surface 12 (see FIG. 1)

Erismann does not disclose flanges on said connectors, wherein said flanges abut the surfaces of said pallets. Shoe discloses a structural connection for connecting adjacent ends of two vertical tubular columns or supports. Said connector comprises coaxial upper and lower spindles 22 and a flange or collar 24 to abut the surfaces of two tubular members 16 and 20 (see FIG. 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the plug connectors as disclosed by Erismann with the connectors as disclosed by Shoe so that the lower surfaces of the upper pallet rest on the upper surfaces of the upper collar members, and the lower surfaces of the lower collar members rest on the upper surfaces of the lower pallet. The motivation for including the connectors with the collars would be to provide a means of stopping the plug connectors from protruding too far into the bores without requiring the conical shape of the plug connectors, which may be more expensive and difficult to manufacture. A simple tubular connector with a stopping member would be an obvious improvement over the conical member in order to simplify the overall structure.

Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over '671 to Erismann in view of '713 to Shoe as applied to claims 1,3,4,5,6,10,12,13,14,15, 16,19, and 20 above, and in further view of U.S. Patent No. 3,576,169 to DePew.

Erismann in view of Shoe disclose a device comprising all of the limitations of claims 1 and 10, but do not disclose a plurality of base plates respectively secured to said lower portions of said posts at perpendicular angles, and attached to the upper surface of the lower pallet. DePew discloses a pallet system comprising a lower pallet 1 comprising four vertical posts 7 and base plates 12 perpendicularly attached to the bottom portions of said posts and secured to said pallet (see FIG. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the base plates as disclosed by DePew as a securing means between the posts and lower pallet as disclosed by Erismann. The motivation for including the base plates would be to reinforce lateral and up-and-down security between the posts and the pallet. The assembly as disclosed by Erismann lacks a securing means in the lateral direction, because the conical shape lends to the bottom portion connection of the posts sliding up and out of the bores 13. The addition of the base plate attached to the tubes and secured to the top and sides of the pallet would be an obvious improvement in order to prevent said sliding.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over '671 to Erismann in view of '713 to Shoe as applied to claims 1,3,4,5,6,10,12,13,14,15, 16,19, and 20 above, and in further view of U.S. Patent No. 6,402,167 to Calleja.

Erismann in view of Shoe disclose a device comprising all of the limitations of claim 5, but do not disclose shelves attached to said posts. Calleja discloses a pallet cart comprising a lower pallet 102 and four vertically extending posts 110,111,112,113. Calleja further discloses shelves 114,115,116 attached to support members 118,119,121,122,123,124 that attach to said posts (see FIG. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the horizontal support members and shelves as disclosed by Calleja on the vertical posts as disclosed by Erismann. The motivation for including shelves would be to provide a display area via the shelves for articles that are stored on the pallet.

Claims 8, 9, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over '671 to Erismann in view of '713 to Shoe as applied to claims 1,3,4,5,6,10,12,13,14,15, 16,19, and 20 above, and in further view of U.S. Patent No. 6,616,359 to Ono.

In regard to claims 8 and 9, Erismann in view of Shoe disclose a device comprising all of the limitations of claim 5, but does not disclose stabilizing members.

In regard to claims 17 and 18, Erismann in view of Shoe disclose an assembly comprising all of the limitations of claim 13, but does not disclose removable front and rear stabilizing bars, perpendicularly extending attachment plates on said posts, nor abutment plates on the ends of said stabilizing bars.

Ono discloses a shoring support structure comprising removable front and rear stabilizers (7,8,9,10), and parallel fixed side support stabilizers (14,15,16,17) as shown in Figure 1. Ono further discloses abutment plates on the ends of said front and rear

Art Unit: 3634

stabilizers (see FIG. 6) adapted to releasably secure to perpendicularly extending attachment plates 45 and 41, which are secured to side posts 11 and 12 (see FIGS. 6 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the removable front and rear stabilizers via the abutment plates on the stabilizers and attachment plates on the posts, as well as the fixed side stabilizer plates as disclosed by Ono, on the vertical posts as disclosed by Erismann. The motivation for including the stabilizers would be to guard the stored merchandise on the pallets as disclosed by Erismann from large objects that may protrude the sides of the pallet assembly. At present, the front, back, and sides of the assembly as disclosed by Erismann is open to the threat of large objects protruding between the posts and damaging said merchandise. The stabilizer bars would be an obvious improvement to prevent such damage. The motivation for including removable front and rear stabilizers would be to enable a series of pallet assemblies to be lined up in a front-to-back orientation, so that long items such as piping, lumber, etc. can be stored without interference from the stabilizers.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 2,870,980 to Higgins.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared W. Newton whose telephone number is (571) 272-2952. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWN
November 17, 2005



RICHARD E. CHILCOT, JR.
SUPERVISORY PATENT EXAMINER